

DB 241 HHSHASHSLPNSPSWSS-GNHGODSLVAAVLAHGLVAVSGVLAAYIRPK 299  
 QY 299 PEYKADPCTYVSLVAFPTFRITMDTVIIIEGVPSHANYDIKALMKIEDVYSVE 358  
 DB 300 PEYKADPCTYVSLVAFPTFRITMDTVIIIEGVPSHANYDIKALMKIEDVYSVE 359  
 QY 359 DLNWSLTSGKSTAIYHQLIPGSSKMEVOSKANHLINTFGWCTCTLOQSYROEVD 418  
 DB 360 DLNWSLTSGKSTAIYHQLIPGSSKMEVOSKANHLINTFGWCTCTLOQSYROEVI 419  
 QY 419 RTCANCOSS 428  
 DB 420 RTCANCOSS 429

## RESULT 3

ZNT4 RAT STANDARD; PRT; 430 AA.

AC 055174;  
 DT 30-MAY-2000 (Rel. 39, Created)  
 DT 30-MAY-2000 (Rel. 39, Last sequence update)  
 DT 15-MAR-2004 (Rel. 43, Last annotation update)  
 DE Zinc transporter 4 (Znt-4) (Drl 27 protein).  
 GN SLC30A4 OR ZNT4.  
 OS Rattus norvegicus (Rat).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.  
 OX NCBI\_Taxid=10116;  
 RN [1]  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=Mcicar; TISSUE=Brain;  
 RX MEDLINE=20068535; PubMed=10600821;  
 RA "Murgia C., Vespignani I., Cerase J., Nobili F., Perozzi G.,  
 RT "Cloning, expression, and vesicular localization of zinc transporter  
 RT Drl 27/Znt4 in intestinal tissue and cells."  
 RL Am. J. Physiol. 277:G1231-G1239 (1999).  
 CC -1- FUNCTION: Probably involved in zinc transport out of the  
 CC cytoplasm, may be by sequestration into an intracellular  
 CC compartment.  
 CC -1- SUBUNIT: Mediates heterodimeric interactions with at least one  
 CC specific partner.  
 CC -1- SUBCELLULAR LOCATION: Integral membrane protein. Localized in  
 CC endosomal vesicle membrane (Probable). In the polarized  
 CC enterocytes, it is mainly localized in the basal cytoplasmic  
 CC region.  
 CC -1- TISSUE SPECIFICITY: Widely expressed. Highly expressed in brain  
 CC and testes. Also expressed in small intestine, medulla, lung,  
 CC kidney, stomach and colon. Expressed at lower level in other  
 CC tissues.  
 CC -1- DEVELOPMENTAL STAGE: Developmentally regulated in the intestine.  
 CC -1- INDUCTION: No change in response to zinc deprivation.  
 CC -1- DOMAIN: Contains a histidine-rich region which is a ligand for  
 CC zinc and an aspartate-rich region which is a potential ligand for  
 CC zinc.  
 CC -1- SIMILARITY: Belongs to the cation diffusion facilitator family of  
 CC transporters (CDF, TC 2.A.4). SLC30A subfamily.  
 CC  
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 CC or send an email to license@isb-sib.ch).  
 CC  
 CC EMBL: Y16774; CAA76372.1;  
 CC InterPro: IPR002524; Cation efflux.  
 CC Pfam: PF01545; Cation efflux; 1.  
 CC TIGRfam: TIGR01297; CDF; 1.  
 CC Zinc transporter; Transport; Transmembrane; Multigene family.  
 CC DOMAIN 1 113 CYTOPLASMIC (POTENTIAL).  
 CC TRANSMEM 114 134 POTENTIAL.

FT DOMAIN 135 143 VACUOLAR (POTENTIAL).  
 FT TRANSMEM 144 164 POTENTIAL.  
 FT DOMAIN 165 178 CYTOPLASMIC (POTENTIAL).  
 FT TRANSMEM 179 199 POTENTIAL.  
 FT DOMAIN 200 216 VACUOLAR (POTENTIAL).  
 FT TRANSMEM 217 237 POTENTIAL.  
 FT DOMAIN 238 275 CYTOPLASMIC (POTENTIAL).  
 FT TRANSMEM 276 296 POTENTIAL.  
 FT DOMAIN 297 311 VACUOLAR (POTENTIAL).  
 FT TRANSMEM 312 332 POTENTIAL.  
 FT DOMAIN 333 430 CYTOPLASMIC (POTENTIAL).  
 FT TRANSMEM 17 96 ASP-RICH (ACIDIC).  
 FT DOMAIN 241 249 HIS-RICH.  
 SQ SEQUENCE 430 AA; 47702 MW; F34CED3FAAF05FB CRC64;

Query Match 91.2%; Score 1990.5; DB 1; Length 430;  
 Best Local Similarity 90.7%; Pred. No. 7.6e-148;  
 Matches 390; Conservative 19; Mismatches 18; Indels 3; Gaps 2;

QY 1 MAGSGAWKRLKSLMRDAPLFLNDTSAPDFDEAGDEGLSRFNLRVVVADGSEAEER 60  
 DB 1 MAGSGAWKRLKSLMRDAPLFLNDTSAPDFDEAGDEGLSRFNLRVVVADGSEAEER 60  
 QY 61 PVNGAFTLQADDSDLDQDLPLTNSQLKXDCNCKGKOEILKORVKTTLTAVL 120  
 DB 61 PVNGAFTLQADDSDLDQDLPLTNSQLKXDCNCKGKOEILKORVKTTLTAVL 120  
 QY 61 PVNGAFTLQADDSDLDQDLPLTNSQLKXDCNCKGKOEILKORVKTTLTAVL 120  
 DB 61 PVNGAFTLQADDSDLDQDLPLTNSQLKXDCNCKGKOEILKORVKTTLTAVL 120  
 QY 121 YLFEMIDELVGYTANSLAMTALMLDLSIILTLTALMLSSKSPKRTFFGHRLE 180  
 DB 121 YLFEMIDELVGYTANSLAMTALMLDLSIILTLTALMLSSKSPKRTFFGHRLE 180  
 QY 121 YLFEMIDELVGYTANSLAMTALMLDLSIILTLTALMLSSKSPKRTFFGHRLE 180  
 DB 121 YLFEMIDELVGYTANSLAMTALMLDLSIILTLTALMLSSKSPKRTFFGHRLE 180  
 QY 181 VLAMISVLYLVITLMEGLLYEAVQRTIHNNYINENIDIMLITAAVGVAVVINGFLNOSG 240  
 DB 181 VLAMISVLYLVITLMEGLLYEAVQRTIHNNYINENIDIMLITAAVGVAVVINGFLNOSG 240  
 QY 181 VLAMISVLYLVITLMEGLLYEAVQRTIHNNYINENIDIMLITAAVGVAVVINGFLNOSG 240  
 DB 181 VLAMISVLYLVITLMEGLLYEAVQRTIHNNYINENIDIMLITAAVGVAVVINGFLNOSG 240  
 QY 241 HHSHASHSLPNSPSWSS-GHSHGQSLVRAFAVHALDGLVOSVGLTAAVIRPK 298  
 DB 241 HHSHASHSLPNSPSWSS-GHSHGQSLVRAFAVHALDGLVOSVGLTAAVIRPK 298  
 QY 299 PEYKADPCTYVSLVAFPTFRITMDTVIIIEGVPSHANYDIKALMKIEDVYSVE 358  
 DB 299 PEYKADPCTYVSLVAFPTFRITMDTVIIIEGVPSHANYDIKALMKIEDVYSVE 358  
 QY 300 PEYKADPCTYVSLVAFPTFRITMDTVIIIEGVPSHANYDIKALMKIEDVYSVE 359  
 DB 300 PEYKADPCTYVSLVAFPTFRITMDTVIIIEGVPSHANYDIKALMKIEDVYSVE 359  
 QY 359 DLNWSLTSGKSTAIYHQLIPGSSKMEVOSKANHLINTFGWCTCTLOQSYROEVD 418  
 DB 360 DLNWSLTSGKSTAIYHQLIPGSSKMEVOSKANHLINTFGWCTCTLOQSYROEVI 419  
 QY 419 RTCANCOSS 428  
 DB 420 RTCANCOSS 429

## RESULT 4

ZNT2 RAT STANDARD; PRT; 359 AA.

AC 062941;  
 DT 30-MAY-2000 (Rel. 39, Created)  
 DT 30-MAY-2000 (Rel. 39, Last sequence update)  
 DT 15-MAR-2004 (Rel. 43, Last annotation update)  
 DE Zinc transporter 2 (Znt-2).  
 GN SLC30A2 OR ZNT2.  
 OS Rattus norvegicus (Rat).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.  
 OX NCBI\_Taxid=10116;  
 RN [1]  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=Sprague-Dawley; TISSUE=Kidney;  
 RX MEDLINE=96203098; PubMed=8617223;  
 RA Palmer R.D., Cole T.B., Findley S.D.,  
 RT "Znt-2, a mammalian protein that confers resistance to zinc by  
 RT facilitating vesicular sequestration."  
 RL EMBO J. 15:1784-1791 (1996).